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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,865	03/18/2004	Philippe Jerome Didier Riviere	88265-7344	5444

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EXAMINER	
CHAWLA, JYOTI	
ART UNIT	**PAPER NUMBER**
1761	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/802,865	RIVIERE ET AL.	
	Examiner	Art Unit	
	Jyoti Chawla	1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 7-28* is/are pending in the application.

4a) Of the above claim(s) *17-27* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5, 7-16 and 28* is/are rejected.

7)☒ Claim(s) *4* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114 dated January 17, 2007, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's claims filed November 17, 2006 has been entered. Claims 1 and 7 have been amended, Claims 6 has been cancelled, Claims 17-27 have been withdrawn from consideration pertaining to a non-elected invention, claim 28 has been added. Claims 1-5, 7-16 and 28 remain pending in and are examined in the application.

Claim Objections

Claim objections identified in the office action Mailed July 19, 2006 have been withdrawn in light of applicant's amendments.
Claims 4-5 are objected to because of the following informalities:

Claim 4, line 2 has a typographical error where the word amount has been written as "a mount". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 –5, 7-16 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite for the recitation of "stabilizing agent comprises a compound having a sufficiently small particle size to act as nucleating agent for water crystals during freezing of the frozen dessert composition so that the composition, independently of any incorporation of gas, is malleable and extrudable at freezing temperatures." It is unclear as to what size of the stabilizing agent would be *sufficiently small* to act as a nucleating agent. Further it is not clear as to what is the freezing temperature range and what standard of malleability is employed to establish if a frozen dessert product is adequately malleable according to the claim as recited. For the purposes of prior art comparison a frozen dessert composition with microcrystalline cellulose (stabilizer recited in Claim 2) in the range recited by the applicant would be considered appropriate to read upon the instantly claimed invention.

Claim 1 is also indefinite for the recitation of "partially frozen water". It is unclear as to what portion of water is frozen or unfrozen in the composition as claimed. For the purposes of prior art comparison frozen dessert composition comprising water in the range recited by the applicant (Claim 3) would be considered appropriate to read upon the instantly claimed invention. It is further noted that "partially frozen water", is suggestive of a method step whereas the claim is addressed to a composition.

Claim 7 is indefinite for failing to further limit the invention as claimed in the independent claim 1. Claim 7 recites "glucose polymers are present in the amount of 60-70% along with a glucose syrup containing from 30-40% by weight of glucose". Claim 7 depends on claim 1, which recites "glucose polymers representing from 10-50% of the weight of the glucose mixture". The proportion of glucose polymers recited in the independent claim is 10-50% which does not include 60-70% as recited in claim 7, thus claim 7 broadens the range or fails to further limit the scope of claim 1 and is therefore indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

(A) Claim 1-5, 7, 9-16 and 28 are rejected under 35 U.S.C. 103(a) as being obvious over Whelan et al (US 5,084,295) in view of Hilker (US 3128193).

Regarding claims 1 and 7, Whelan et al, hereinafter Whelan, teaches a frozen dessert composition comprising of water, proteins, fat, sweetening agents and stabilizing agents (Abstract and Column 6, lines 1-8, lines 31-38). Regarding the partially frozen water, Whelan teaches water, however, since the reference teaches a frozen dessert composition, the finished frozen product would comprise partially frozen/frozen water as recited.

The sweetening agents as taught by Whelan include sucrose, glucose, fructose, maltose corn syrup, high fructose corn syrup, invert sugar, maple syrup, honey, brown sugar, refiners syrup (i.e., liquid sugar or sucrose etc. Whelan further teaches addition of reduced calorie or no calorie sweeteners that replace the sweetening composition

partially or completely (Column 12). The sweeteners taught by Whelan include glucose as discussed above and glucose polymers (disaccharides where n=2, oligosaccharides and polysaccharides where n>2) and polyols and high intensity sweeteners (Columns 8 and 12). Whelan teaches monosaccharides (glucose, mannose, galactose, fructose, sorbose (column 8, 46-47)) disaccharides (maltose, sucrose and lactose (Column 8, lines 51-53)), oligosaccharides and polysaccharides and sugar alcohols including those derived from xylose, arabinose, ribose, methylglucoside (e.g., sorbitol, xylitol etc (Column 8, lines 25-38 and 48-50 and Column 12, lines 5-68)). The proportion of the nutritive or calorific sweetening mixture taught by Whelan comprises from about 10 to about 20% of the product (Column 12, lines 5-15) and the reduced calorie sugars comprise from about 10-20%. Thus Whelan teaches of a sweetening mixture comprising glucose and polymers including polyols, and high intensity sweeteners combined in the range of 10 to 40%, which falls in applicant's range (10-30%) as recited in claim 1.

Regarding the amount of glucose polymers representing from 10-50% (claim 1) and (60-70% in claim 7) of the sweetening mixture of glucose and polymers as recited by the applicant, Whelan teaches addition of glucose, lactose, sucrose and other nutritive sweeteners from 10-20% of the dessert composition. The reference also teaches replacing part or whole of the sweetener mixture with low calorie sweeteners such as sorbitol or Xylitol etc or other high intensity sweeteners, such as, Acesulfame K in the range of 10-20% of the dessert composition. The reference further teaches that a combination of glucose, sucrose etc., with a low or no-calorie sweetener mixture can be used based on the calorie reduction benefit desired. The reference also teaches of varying the composition of the sweetener mixture in order to modify the caloric content of the final product. Thus the reference teaches of sweeteners, where glucose polymers, such as, low calorie sugar alcohols and sucrose and other polysaccharides are in the range of 0 to 100% of the sweetening composition. Thus Whelan reference reads upon the instantly claimed invention. However, the reference does not give any specific proportion of glucose and glucose polymers in the sweetener mixture. Therefore, one of ordinary skill in the art would be motivated to look to the art for

specific proportions of sweeteners. Hilker et al, hereinafter Hilker, teaches of a low fat frozen dessert with an aqueous component and a fat component. The aqueous component comprises water, protein, sweetening agents, stabilizers and flavoring ingredients (Column 2, lines 9-31) as recited by the applicant in claim 1. The sweetening agents taught by Hilker are sucrose and corn syrup solids (Column 3, Lines 53-60, Example I). Sucrose is a polymer of glucose, with two molecules of glucose, i.e., n=2, as recited by the applicant in claim 1. Corn syrup solids are dextrose, i.e., glucose. Thus Hilker teaches the sweetener agents that are used together (i.e., a mixture) which comprise 100% of the sweetener mixture, which is in the recited range of (at least 90%) the applicant. Hilker teaches the frozen confection composition where 10-12% sucrose and 7.5-8% corn syrup solids, i.e., 17.5-20% sweetener (Columns 3 and 4, Examples I and II), i.e., 50% to 60% of the sweetener composition comprising glucose comprises of glucose polymers. Thus the amount of glucose polymers taught by Hilker fall within the instantly claimed ranges for claims 1 and 7. From the references above one of ordinary skill in the art would have been able to ascertain that sweetener mixtures with glucose and glucose polymers were known at the time of the invention (Whelan and Hilker). Sweetener mixture with any combination of glucose and polymers was known at the time of the invention (Whelan). Relative proportion of glucose and glucose polymers in the range recited by the applicant was known at the time of the invention (Hilker). Therefore, one of ordinary skill in the art at the time of the invention would have been motivated to modify Whelan and add sweetener comprising glucose and its polymers in the relative proportion as taught by Hilker, in order to make a frozen dessert with the desired combination of sweetening agents. One would have been further motivated to do so in order to create a general formula or a proportion of the sweetener mixture for a frozen dessert product, which could be used to make a variety of frozen desserts with varying calorie content (based on the glucose polymers used as part of sweetening mixture) with a relatively set proportion of glucose. A set proportion of glucose in the sweetener mixture would be able to provide a frozen dessert product with a certain degree of characteristic glucose sweetness irrespective of the other polymer sweeteners used.

Regarding claim 2, Whelan teaches of stabilizing agent comprising microcrystalline cellulose as recited. The amount of stabilizer included in the frozen dessert is up to 1%, typically from about 0.05% to about 0.5% (Column 14, lines 48-61), which falls within the instantly claimed range.

Regarding the stabilizing agents as recited in claim 1, Whelan teaches stabilizing agents including microcrystalline cellulose, locust bean gum, etc., in the frozen dessert composition. Microcrystalline cellulose is a highly purified particulate form of cellulose with a particle size range of 1-150 microns. Microcrystalline cellulose is used as a stabilizer/ emulsifier in foods. Whelan teaches that stabilizing agents produce smoothness in the textural properties of the product and retard ice crystal growth during storage of the product (Column 14, lines 39-55). The reference also teaches of emulsified particle size of 5 microns or less such that the frozen dessert produced has a smooth, creamy and non-gritty mouth feel (Column 7 and 14). The reference further teaches that the fat is emulsified in such a way as to give the final product the smoothness and creaminess of the conventional ice-cream products. The Whelan reference teaches of the stabilizers as recited by the applicants, in the recited range of the applicant. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that the stabilizers as taught by Whelan would function in a similar fashion and act as the nucleating agents as in the instantly claimed invention, absent any clear and convincing evidence and arguments to the contrary.

Regarding claim 3, Whelan teaches that the frozen dessert composition comprises water in the range from about 50 to about 75% (Column 14, lines 30-32), which encompasses applicant's recited range of 40-62%. Regarding the partially frozen water, Whelan teaches water, however, since the reference teaches a frozen dessert composition, the finished frozen product would comprise partially frozen/frozen water as recited.

Regarding claims 4-5, Whelan teaches of stabilizers including carrageenan and xanthan (gums or thickeners), alginate, gelatin, carboxymethylcellulose (CMC), etc., (Column 14, lines 48-55) which are well known in the art as thickeners. The reference also teaches the amount of suitable emulsifiers ranges from about 0.05 to about 2% (Column 14, lines 11-12) and optional ingredients such as egg yolk from about 1 to 2% of the frozen dessert product (Column 14, line 62 to Column 15, line 6). The reference further teaches that suitable emulsifiers are monoglycerides and diglycerides of fatty acids (Column 13, lines 60-68). Thus the reference teaches of emulsifiers and thickeners as recited by the applicant in the instantly claimed range of 0.3 to 2.7%.

Regarding claim 9, Whelan teaches a fat content from about 2 to about 20% (Column 4, lines 58-60), which encompasses the instantly claimed range of 4-20%.

Regarding claims 10-11, Whelan teaches of suitable plant derived fats including sunflower oil, coconut oil, safflower oil and olive oil (Column 9, lines 1-10) as recited in claims 10 and 11. Sunflower oil, is a plant-based oil with the onset of solidification within the recited range of the applicant. The reference also teaches of milk fat, e.g., butter, (Column 7, lines 38-40) which is a soft solid at room temperature and thus has the onset of solidification at temperatures above 0^0C as recited by the applicant.

Regarding claim 12, Whelan teaches proteins from about 3 to about 15% (Column 11, lines 27-29) as instantly claimed.

Regarding claims 13-14, Whelan teaches suitable proteins including, whole milk, skimmed milk, skimmed milk from which a portion of the lactose has been removed, sweet dairy whey, neutralized acid whey, modified whey, whey protein concentrate etc., (Column 11, lines 35-50). Although Whelan does not specifically teach demineralized whey, however, neutralized acid whey and modified whey as taught by Whelan would include demineralized whey because to produce demineralized whey, whey is modified

by ion exchange or electrodialysis to remove the minerals (Wile's Encyclopedia of Food Science and Technology 1999, page 2655).

Regarding claim 15, Whelan teaches of non-dairy based sources of protein, such as, soy protein (Column 11, lines 59-61). Soy is a leguminous plant, thus the reference teaches of leguminous protein source as instantly claimed.

Regarding claim 16, Whelan teaches a frozen dessert product with other components including flavoring substances (Column 13, lines 20-50).

Regarding claim 28, Whelan teaches of a frozen dessert product with a sweetener comprising high fructose corn syrup (Column12, lines 5-10), i.e., the pure corn syrup (100% glucose) has been modified to increase the fructose content and thus the syrup contains glucose and fructose. Thus Whelan teaches of a sweetener mixture that comprises fructose as instantly claimed.

(B) Claim 8 is rejected under 35 U.S.C. 103(a) as being obvious over Whelan et al and Hilker as applied to claims 1-5, 7, 9-16 and 28 above further in view of Cole et a. (US 4,452,824).

Whelan and Hilker have been applied to claims 1-5, 7, 9-16 and 28 above.

Regarding claim 8, Whelan does not teach of glycerol in the frozen dessert product. Glycerol is a polyol or polyhydric alcohol that was known for its fuction for imparting softness to the frozen product. Thus one of ordinary skill in the art at the time of the invention would have been motivated to look to the art for a frozen dessert product with glycerol. Cole et al, hereinafter Cole, teaches a soft frozen dessert comprising low molecular weight polyhydric alcohols such as glycerol at a level of 1% to 5%(Column 2, lines 35-50), which encompasses applicant's instantly claimed range. The reference further teaches that glycerol in the amount taught functions as freezing point

depressants to impart increased softness to a frozen product. Thus frozen dessert products with glycerol in the amount recited by the applicant were known at the time of the invention (Cole). It was also known that glycerol helped to depress the freezing point of the frozen product resulting in a softer frozen product (Cole). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Whelan and add glycerol in the amount taught by Cole in order to depress the freezing point of the product and make a softer and more malleable frozen dessert product.

(C) Claims 1-5 and 9-14, 16 and 28 are rejected under 35 U.S.C. 103(a) as being obvious over Morley (US 4,427,701) in view of Cole et al (US. 4,452,824).

The references and rejection are incorporated herein and as cited in the office action mailed July 19, 2006.
Regarding the newly added claim 28, Morley teaches the addition of fructose in the sweetening mixture of the frozen dessert, thus the reference teaches of the invention as recited in claims 1-5 and 9-14, 16 and 28.

Response to Arguments

Applicant's arguments filed November 17, 2006, regarding the rejection of claims 1-5, 7-16 have been fully considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the surprising sweetening and texturizing effects of the sweetening mixture and sweetening mixtures unique compensation of reduction of fat (Remarks, pages 9 and 10)) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Therefore, applicant's arguments have been considered and claims 1-5, 7-16 and 28 are rejected for the reasons of record.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jyoti Chawla whose telephone number is (571) 272-8212. The examiner can normally be reached on 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jyoti Chawla
Examiner
Art Unit 1761

KEITH HENDRICKS
PRIMARY EXAMINER